December 2009 Update

Tooele Army Depot (North Area) Superfund Site

Tooele County, Utah
(Five -Year Review Date: 9/28/08)

Highlights Since the 2008 Five-Year Review

- **New groundwater monitoring plan due May 31, 2010**
- **Well D-20 completed October 31, 2009**

Brief Site History: Tooele Army Depot has been an active Army base since the early 1940s. The 23,732-acre Depot is located in northeastern Tooele County, Utah, about 35 miles southwest of Salt Lake City. Environmental contamination occurred during the Depot's 50-plus years of storing ammunition and repairing equipment. The Depot was placed on the Superfund National Priorities List (NPL) in October 1990. The U.S. Army, Utah Department of Environmental Quality (UDEQ) and the EPA are cooperatively investigating and cleaning up contamination at the site. An initial environmental assessment of the Depot, completed in 1979, found potential contamination at an area where explosives were burned or detonated in the open. Further studies showed contamination in soils and groundwater, due to equipment maintenance, munitions disposal and other industrial activities. Some contaminants of concern are explosives, lead, cadmium, barium, pesticides, hydrocarbons, solvents, waste oils and polychlorinated biphenyls (PCBs).

In March 1993, part of the Depot (1,663 acres) was placed on the Base Realignment and Closure (BRAC) list. As a BRAC site, 41 acres were transferred by the U.S. Army for private use in 1996. The remaining 1,622 acres of the BRAC parcel were transferred to the Redevelopment Agency of the City of Tooele in 1998. The property was subsequently sold by Tooele City to a commercial developer. All contaminated soil areas in the 1,663-acre parcel have been cleaned up by the U.S. Army. The underlying contaminated groundwater is being addressed under the comprehensive groundwater remedy for the facility. The remaining 23,732 acres will be retained by the Army for continued storage of conventional ammunition.

Cleanup Activities Completed: Three interim removal actions were completed in 1997 at Resource Conservation and Recovery Act (RCRA) sites and two at Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) sites in 1998 and one RCRA site in 2000. These actions included:

- Removal of soil contaminated with explosives

- Removal of expended crowd-control devices (such as tear gas) from a trench
- Removal and decontamination of equipment at two sites
- Removal of a sump and contaminated soil at the battery-maintenance building, where soil was contaminated with lead and battery acid
- Closure and removal of a waste-disposal sump.

Current Status: This is a statutory review. The next five-year review is scheduled to be complete in September 2013.

Between 1991 and 1993, the Army constructed one of the country's largest groundwater treatment plans to address a contaminant plume that had migrated near the northern boundary of the site. The plume has not migrated any farther and remains near the Depot boundaries. A second contaminant plume is being investigated on the northeastern side of the base. Both plumes are being evaluated for a comprehensive remedy for the contaminated groundwater.

All areas of other contamination in soils are on site and have been cleaned up with the exception of one remaining area and several old munitions areas that will be cleaned up under the Military Munitions Remediation Program (MMRP).

Tooele contains 14 operable units (OUs) containing 58 solid waste management units (SWMUs). OUs 4 through 10, which contain 17 SWMUs, are being cleaned up under the Superfund program. OUs 1 through 3 and 11 through 14 are being addressed under Utah Resource Conservation and Recovery Act (RCRA) authority.

Summary of Protectiveness:

Soil Remedies: The soil remedies at Tooele Army Depot are protective. Active remediation has been completed on contaminated soils as necessary to protect current and future industrial workers and construction workers, as well as ecological receptors. Institutional controls to prevent residential development have been enacted where risks to hypothetical future residents are greater than 10-6 or hazard index is greater than one. The active remediation activities included excavation and disposal, soil stabilization, and capping. These activities all successfully met the remedial action objectives. A site management program has been implemented which has successfully managed the institutional controls.

Groundwater Remedies: The groundwater remedies are protective in the short term. The SWMU 2 groundwater pump-and-treat system has operated from 1993 to 2004, and the TCE plume did not expand 85 during that time. The plume also has not perceptibly expanded during the subsequent non-operation test. Institutional control of an informal nature has prevented residential use of contaminated groundwater in the SWMU 2 plume. The SWMU 58 Groundwater Management Area has implemented an interim formal institutional control over groundwater use in the off-post Northeast Boundary Plume. The groundwater remedy for SWMU 2 and SWMU 58 groundwater plumes are part of RCRA

Corrective Measures Strategy (CMS) which will propose a final remedy to address the groundwater contamination.

Issues Impacting Protectiveness: Issues in the TEAD restoration program that have been identified in the 2008 review are listed here. This list of issues is limited to those associated with implemented remedies or interim remedies.

Tooele Army Depot (North Area) Superfund Site
Five-Year Review Update Table
(Review Date: 9/28/08)

Issues	Recommendations Follow-up	Follow-up Actions (Status/ Due Date)	Status of Follow-up Actions 12/09	Resp. Party
1. The pump and treat system is not likely to reduce VOC concentrations to the groundwater protection standard specified in the Permit in all wells within the plume.	Continue with the alternate measures evaluation and the current plan to provide a revised corrective measure for the SWMU 2 within the CMS for SWMU 58.	Dependent on CMS Due 7/15/2011		TEAD
2. Several groundwater injection wells will need corrosion protection installed if they are to be operated again.	Monitor the status of potential future system re-start, and install corrosion protection systems as appropriate.	Dependent on CMS Due 7/15/2011		TEAD
3. If the groundwater treatment system is to be operated full time again, major repairs/ replacement of system components may be necessary due to age and obsolescence.	Monitor the status of potential future system re-start, and affect repairs when appropriate.	Dependent on CMS Due 7/15/2011		TEAD
4. The State has expressed concern over the methodology employed in statistical trend analysis for monitoring the plume boundary.	In the report for the NOT, provide evaluation of the statistical methods and provide recommendations for any follow-on application of statistical methods in the event this type of boundary monitoring will continue.	Part of CMS due 7/15/2011		TEAD

Issues	Recommendations Follow-up	Follow-up Actions (Status/ Due Date)	Status of Follow-up Actions 12/09	Resp. Party
5. There is no formal institutional control over use of groundwater in the SWMU 2 plume during the time that groundwater protection standards are exceeded.	In the SWMU 58 CMS, incorporate institutional control over groundwater use into the corrective measures for all groundwater plumes.	Part of CMS due 2011		TEAD
6. There are many monitoring wells at TEAD that are no longer used for groundwater sampling, but still require maintenance.	Develop a program to evaluate each well/ piezometer for its value for sampling or water level measurement. Identify candidates for abandonment.	Part of CMS due 7/15/2011		TEAD
7. The groundwater monitoring program currently includes approximately 100 wells. As the SWMU 58 investigations and the SWMU 2 re-evaluation are completed, there will be an opportunity to optimize the program.	Proceed with optimization of the monitoring program after the SWMU 58 CMS is completed.	New groundwater monitoring program due 5/31/2010		TEAD
8. There is no sentry monitoring well in the GWMA interim remedy beyond well D-17 that shows non-detect levels.	Develop a recommendation regarding this issue in the SWMU 58 CMS, where the final remedy selection is recommended.	Well D-20 installed 10/31/2009	Complete	TEAD
9. There is no modification to the RODs for OUs 5 and 7 to account for the changes in remedy at Sites 5 and 17.	Prepare ESDs for OUs 5 and 7 to document the change from “No further action” to “Institutional controls”.	Determined not to be necessary	Complete	TEAD